M3T-FLX-144NSD

Converter Board for Connecting FLX160 to 144-pin 0.5-mm-pitch LQFP

User's Manual

CAUTION If the requirements shown in the "CAUTION" sentences are ignored, the equipment may cause personal injury or damage to the products.

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1. Outline

The M3T-FLX-144NSD is a converter board for connecting the 160-core flexible cable FLX160 to a foot pattern for 144-pin 0.5-mm-pitch LQFP (144P6Q-A).

2. Package Components (See Figure 1)

(1) M3T-FLX-144NSD converter board............................ x1
(2) YQPACK144SD (made by Tokyo Eletech Corporation).................. x1
(3) NQPACK144SD-ND (made by Tokyo Eletech Corporation) x1
(4) YQ-GUIDE's x4
(5) M3T-FLX-144NSD User's Manual (This manual)

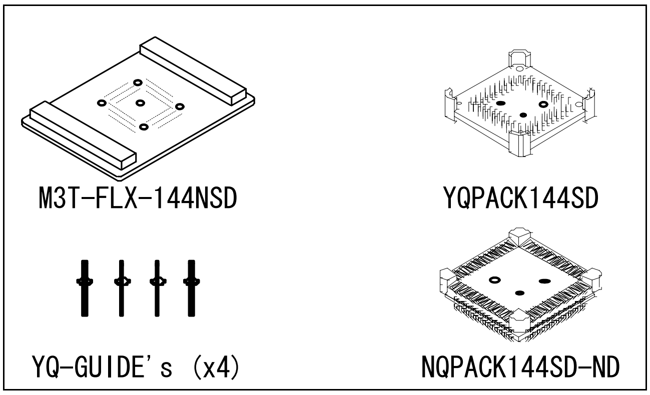


Figure 1 Package components of the M3T-FLX-144NSD

3. Specifications

Table 1 Specifications

Applicable package	144P6Q-A (144-pin 0.5-mm-pitch LQFP)
Insertion/removal iterations of connector	50 times guaranteed

4. Usage (See Figure 2)

The M3T-FLX-144NSD can be used for debugging and board-mounted evaluation in common by mounting the NQPACK144SD-ND on the user system.

(1) For debugging
Mount the NQPACK144SD-ND on the foot pattern of the user system and attach the YQPACK144SD on it. And connect the probe of the emulation pod to the upper connector of the M3T-FLX-144NSD. Then connect the YQPACK144SD and the M3T-FLX-144NSD.

(2) For onboard evaluation
Mount an MCU with on-chip flash memory or one-time PROM and the HQPACK144SD (separately available) in that order on the NQPACK144SD-ND on the user system.

Before using the M3T-FLX-144NSD, be sure to read "7. Precautions" on page 4.

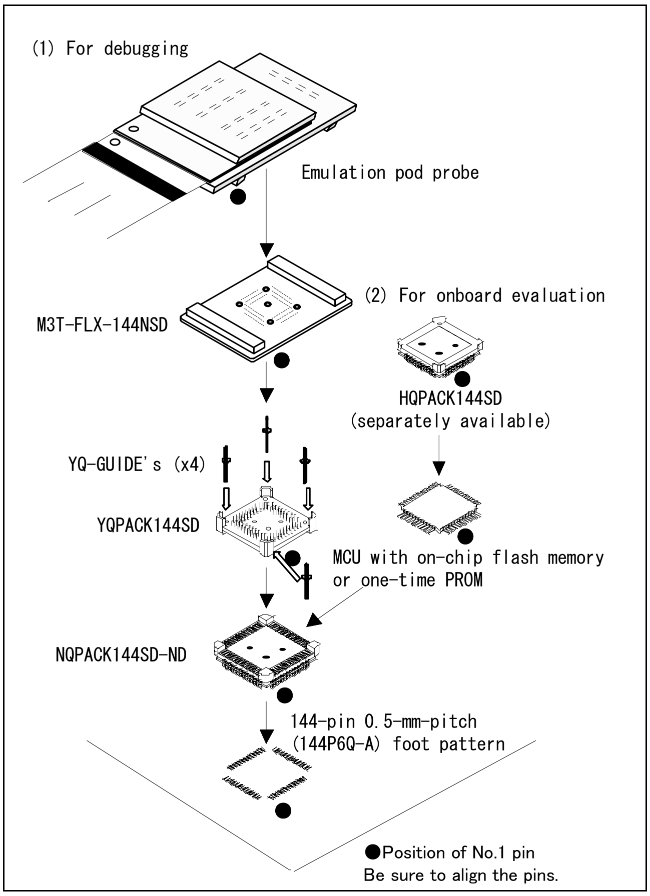


Figure 2 Usage of the M3T-FLX-144NSD

5. Connection Procedure (See Figure 3)

The procedure for connecting the M3T-FLX-144NSD is shown below.

(1) Mount the NQPACK144SD-ND on the user system.

(2) Attach the YQPACK144SD on the NQPACK144SD-ND.

(3) Secure the four corners of the YQPACK144SD with the YQ-GUIDE's.

> ● **Do not use the screws included with the YQPACK144SD.**
> ● **Do NOT use the screwdriver included with the NQPACK144SD-ND that is used only for the HQPACK144SD. It is not for the YQ-GUIDE's.**

(4) Attach the probe of the emulation pod to the M3T-FLX-144NSD.

(5) Connect M3T-FLX-144NSD to the emulator probe.

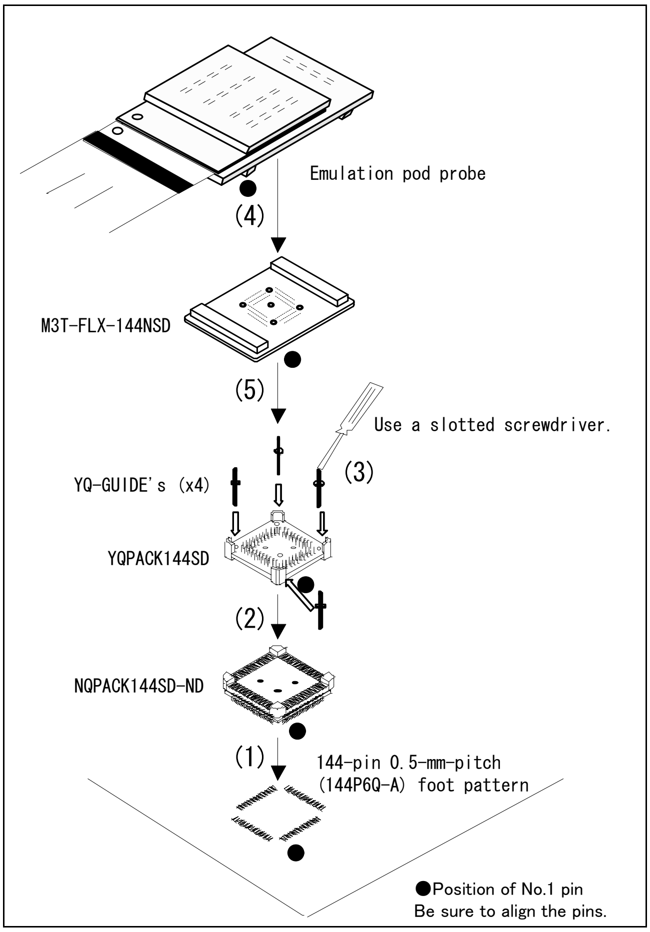


Figure 3 Connection procedure of the M3T-FLX-144NSD

6. External Dimensions and a Sample Foot Pattern

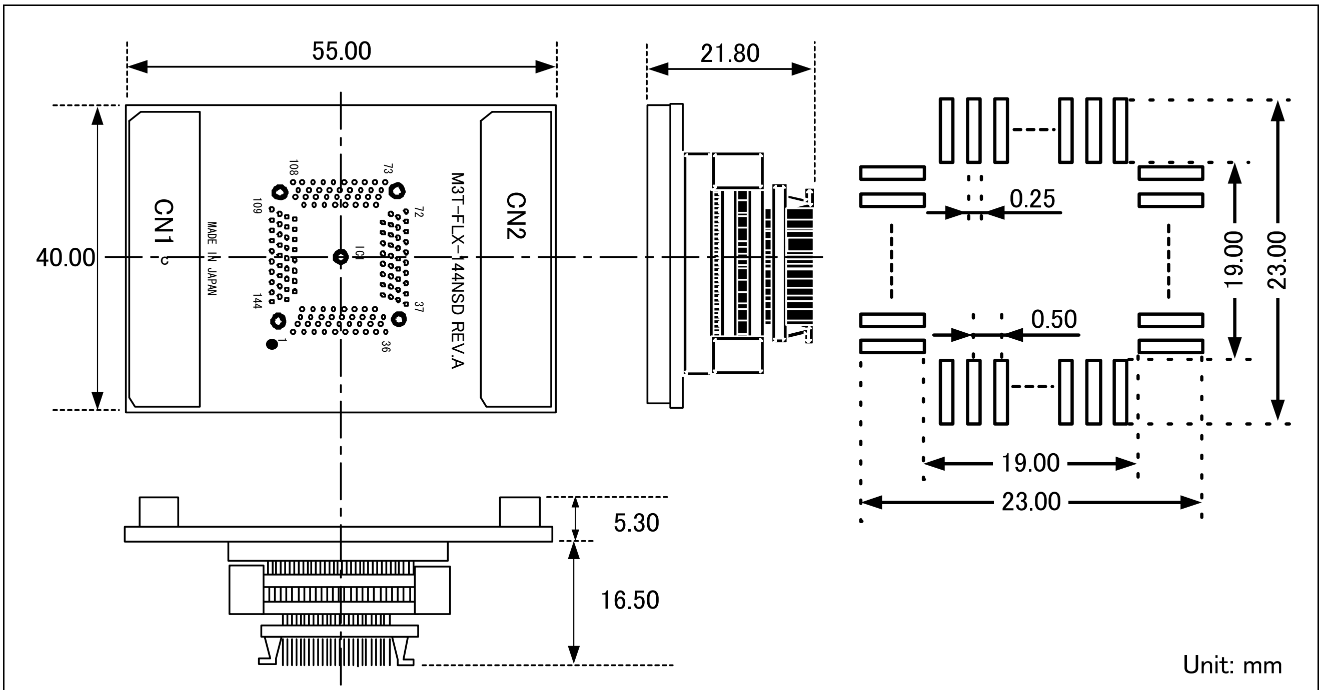


Figure 4 External dimensions and a sample foot pattern of the M3T-FLX-144NSD

7. Precautions

⚠ CAUTION

Caution to Be Taken for This Product:

- When connecting the YQPACK144SD, be sure to use the included YQ-GUIDE's.
- Do NOT use the screws included with the YQPACK144SD for connecting the YQPACK144SD.

IMPORTANT

Notes on This Product:

- We cannot accept any request for repair.
- For purchasing the NQPACK144SD-ND, YQPACK144SD, HQPACK144SD, contact the following:
  Tokyo Eletech Corporation http://www.tetc.co.jp/e_tet.htm
- For inquiries about the product or the contents of this manual, contact your local distributor.
  Renesas Tools Homepage http://www.renesas.com/en/tools

* NQPACK, YQPACK, YQSOCKET, YQ-GUIDE, HQPACK, TQPACK and TQSOCKET are trademarks of Tokyo Eletech Corporation

8. Correspondence of Connectors CN1 and CN2

Table 2 Correspondence of the connectors

CN1	IC1	CN1	IC1	CN2	IC1	CN2	IC1
CN1-01a	—	CN1-01b	18	CN2-01a	—	CN2-01b	19
CN1-02a	17	CN1-02b	16	CN2-02a	20	CN2-02b	21
CN1-03a	15	CN1-03b	14	CN2-03a	22	CN2-03b	23
CN1-04a	13	CN1-04b	12	CN2-04a	24	CN2-04b	25
CN1-05a	11	CN1-05b	10	CN2-05a	26	CN2-05b	27
CN1-06a	9	CN1-06b	8	CN2-06a	28	CN2-06b	29
CN1-07a	7	CN1-07b	6	CN2-07a	30	CN2-07b	31
CN1-08a	5	CN1-08b	4	CN2-08a	32	CN2-08b	33
CN1-09a	3	CN1-09b	2	CN2-09a	34	CN2-09b	35
CN1-10a	1	CN1-10b	—	CN2-10a	36	CN2-10b	—
CN1-11a	—	CN1-11b	144	CN2-11a	—	CN2-11b	37
CN1-12a	143	CN1-12b	142	CN2-12a	38	CN2-12b	39
CN1-13a	141	CN1-13b	140	CN2-13a	40	CN2-13b	41
CN1-14a	139	CN1-14b	138	CN2-14a	42	CN2-14b	43
CN1-15a	137	CN1-15b	136	CN2-15a	44	CN2-15b	45
CN1-16a	135	CN1-16b	134	CN2-16a	46	CN2-16b	47
CN1-17a	133	CN1-17b	132	CN2-17a	48	CN2-17b	49
CN1-18a	131	CN1-18b	130	CN2-18a	50	CN2-18b	51
CN1-19a	129	CN1-19b	128	CN2-19a	52	CN2-19b	53
CN1-20a	127	CN1-20b	—	CN2-20a	54	CN2-20b	—
CN1-21a	—	CN1-21b	126	CN2-21a	—	CN2-21b	55
CN1-22a	125	CN1-22b	124	CN2-22a	56	CN2-22b	57
CN1-23a	123	CN1-23b	122	CN2-23a	58	CN2-23b	59
CN1-24a	121	CN1-24b	120	CN2-24a	60	CN2-24b	61
CN1-25a	119	CN1-25b	118	CN2-25a	62	CN2-25b	63
CN1-26a	117	CN1-26b	116	CN2-26a	64	CN2-26b	65
CN1-27a	115	CN1-27b	114	CN2-27a	66	CN2-27b	67
CN1-28a	113	CN1-28b	112	CN2-28a	68	CN2-28b	69
CN1-29a	111	CN1-29b	110	CN2-29a	70	CN2-29b	71
CN1-30a	109	CN1-30b	—	CN2-30a	72	CN2-30b	—
CN1-31a	—	CN1-31b	108	CN2-31a	—	CN2-31b	73
CN1-32a	107	CN1-32b	106	CN2-32a	74	CN2-32b	75
CN1-33a	105	CN1-33b	104	CN2-33a	76	CN2-33b	77
CN1-34a	103	CN1-34b	102	CN2-34a	78	CN2-34b	79
CN1-35a	101	CN1-35b	100	CN2-35a	80	CN2-35b	81
CN1-36a	99	CN1-36b	98	CN2-36a	82	CN2-36b	83
CN1-37a	97	CN1-37b	96	CN2-37a	84	CN2-37b	85
CN1-38a	95	CN1-38b	94	CN2-38a	86	CN2-38b	87
CN1-39a	93	CN1-39b	92	CN2-39a	88	CN2-39b	89
CN1-40a	91	CN1-40b	—	CN2-40a	90	CN2-40b	—

(NC: No connection)